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C12 0.0275(17) 0.0259(16) 0.0181(15) 0.0033(12) 0.0100(13) 0.0075(13)
C13 0.0219(16) 0.0204(15) 0.0297(17) 0.0021(12) 0.0116(13) 0.0038(12)
C14 0.0195(16) 0.0239(16) 0.0302(17) 0.0032(13) 0.0038(13) 0.0106(13)
C15 0.0184(15) 0.0164(14) 0.0172(14) 0.0059(11) 0.0038(12) 0.0041(11)
C16A 0.035(4) 0.019(3) 0.017(3) 0.006(2) 0.010(3) 0.006(3)
C16B 0.037(4) 0.027(3) 0.044(4) 0.022(3) 0.033(3) 0.022(3)
C17 0.0341(18) 0.0145(14) 0.0201(15) 0.0058(11) 0.0086(13) 0.0051(13)
C18 0.072(3) 0.0174(16) 0.0260(18) 0.0025(14) 0.0037(18) -0.0054(17)
C19 0.042(2) 0.0198(15) 0.0287(17) 0.0104(13) 0.0118(15) 0.0050(14)
C20 0.055(2) 0.0329(18) 0.0356(19) 0.0209(15) 0.0265(17) 0.0304(17)
C21 0.0157(14) 0.0136(13) 0.0197(14) 0.0001(11) 0.0051(12) 0.0033(11)
C22 0.0169(15) 0.0246(15) 0.0212(15) -0.0017(12) 0.0045(12) -0.0001(12)
C23 0.036(2) 0.0321(18) 0.047(2) 0.0162(16) 0.0157(17) 0.0012(15)
C24 0.0222(16) 0.0179(14) 0.0224(15) -0.0041(12) 0.0065(13) 0.0045(12)
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C26 0.0167(14) 0.0119(13) 0.0185(14) 0.0054(11) 0.0040(11) 0.0048(11)
C27 0.0230(16) 0.0244(15) 0.0189(15) 0.0089(12) 0.0062(12) 0.0131(13)
C28 0.0387(19) 0.0231(16) 0.0287(17) 0.0139(13) 0.0186(15) 0.0131(14)
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C30 0.0208(16) 0.0245(16) 0.0436(19) 0.0102(14) 0.0128(15) 0.0091(13)
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C42 0.023(4) 0.033(3) 0.030(4) -0.002(3) 0.009(3) 0.010(3)
C43 0.055(5) 0.028(4) 0.023(4) 0.008(3) 0.016(3) 0.027(4)
C44 0.034(4) 0.018(3) 0.039(4) 0.005(3) 0.010(3) 0.007(3)
C45 0.028(4) 0.039(5) 0.023(4) 0.002(3) 0.002(3) 0.004(4)
C46 0.053(5) 0.026(3) 0.033(4) 0.009(3) 0.014(4) 0.016(3)
C47 0.023(4) 0.037(4) 0.037(4) 0.010(3) 0.012(3) 0.012(3)

```

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All esds (except the esd in the dihedral angle between two l.s. planes) are estimated using the full covariance matrix. The cell esds are taken into account individually in the estimation of esds in distances, angles and torsion angles; correlations between esds in cell parameters are only used when they are defined by crystal symmetry. An approximate (isotropic)

treatment of cell esds is used for estimating esds involving l.s. planes.

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 Zr1 C2 2.438(3) . yes
 Zr1 C11 2.4461(7) . yes
 Zr1 C3 2.562(3) . yes
 Zr1 C5 2.564(2) . yes
 Zr1 C10 2.606(2) . yes
 Zr1 C8 2.620(2) . yes
 Zr1 C9 2.665(2) . yes
 Zr1 C4 2.671(2) . yes
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 Si1 C12 1.862(3) . ?
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 Si1 C6 1.889(3) . ?
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 Si2 C2 1.867(3) . ?
 Si2 C13 1.867(3) . ?
 Si2 C7 1.889(3) . ?
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 C6 C7 1.477(3) . ?
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 C41 C46 1.266(10) 2_556 ?
 C41 C44 1.474(11) 2_556 ?

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C3 Zr1 C10 145.03(8) . . ?
C5 Zr1 C10 116.63(8) . . ?
C6 Zr1 C8 55.08(8) . . ?
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C2 Zr1 C8 95.02(8) . . ?
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C3 Zr1 C8 113.82(8) . . ?
C5 Zr1 C8 144.42(8) . . ?
C10 Zr1 C8 52.37(8) . . ?
C6 Zr1 C9 53.56(8) . . ?
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CIF FILE FOR (S)-7

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'H' 'H' 0.0000 0.0000
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'Cl' 'Cl' 0.1484 0.1585
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'-x, y+1/2, -z'

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_cell_volume                3631.2(3)

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S49

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_diffn_radiation_monochromator graphite
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Refinement of F^2 against ALL reflections. The weighted R-factor wR and goodness of fit S are based on F^2 , conventional R-factors R are based on F , with F set to zero for negative F^2 . The threshold expression of $F^2 > 2\sigma(F^2)$ is used only for calculating R-factors(gt) etc. and is

not relevant to the choice of reflections for refinement. R-factors based

on F^2 are statistically about twice as large as those based on F , and R-

factors based on ALL data will be even larger.

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'Flack H D (1983), Acta Cryst. A39, 876-881'
_refine_ls_abs_structure_Flack    -0.08(3)
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Zr1 Zr 0.46482(3) 0.991292(17) 0.39171(3) 0.01140(10) Uani 1 1 d . . .
Cl1A Cl 0.50015(9) 1.11077(6) 0.36243(8) 0.0174(3) Uani 1 1 d . . .
Cl2A Cl 0.30897(9) 0.99935(6) 0.44558(7) 0.0173(2) Uani 1 1 d . . .
Si1A Si 0.65576(10) 0.92432(7) 0.32878(8) 0.0133(3) Uani 1 1 d . . .
Si2A Si 0.48238(11) 0.82699(7) 0.41337(9) 0.0135(3) Uani 1 1 d . . .
C1A C 0.6376(3) 0.9368(2) 0.4492(3) 0.0134(11) Uani 1 1 d . . .
C2A C 0.5647(4) 0.8978(3) 0.4850(3) 0.0158(11) Uani 1 1 d . . .
C3A C 0.5406(3) 0.9398(2) 0.5554(3) 0.0135(11) Uani 1 1 d . . .
H3A H 0.4942 0.9269 0.5907 0.016 Uiso 1 1 calc R . .
C4A C 0.5956(3) 1.0036(3) 0.5651(3) 0.0127(11) Uani 1 1 d . . .
C5A C 0.6534(3) 1.0001(3) 0.4981(3) 0.0140(10) Uani 1 1 d . . .
H5A H 0.6973 1.0361 0.4876 0.017 Uiso 1 1 calc R . .
C6A C 0.5090(3) 0.9254(2) 0.2698(3) 0.0141(11) Uani 1 1 d . . .
C7A C 0.4356(4) 0.8834(2) 0.3050(3) 0.0139(10) Uani 1 1 d . . .
C8A C 0.3322(3) 0.9139(3) 0.2670(3) 0.0140(10) Uani 1 1 d . . .
C9A C 0.3447(4) 0.9729(2) 0.2153(3) 0.0128(11) Uani 1 1 d . . .
H9A H 0.2898 1.0044 0.1867 0.015 Uiso 1 1 calc R . .
C10A C 0.4485(3) 0.9788(2) 0.2118(3) 0.0125(10) Uani 1 1 d . . .
C11A C 0.7265(4) 1.0012(3) 0.3038(3) 0.0212(12) Uani 1 1 d . . .
H11A H 0.7995 1.0005 0.3449 0.032 Uiso 1 1 calc R . .
H11B H 0.6914 1.0431 0.3159 0.032 Uiso 1 1 calc R . .
H11C H 0.7260 1.0004 0.2373 0.032 Uiso 1 1 calc R . .
C12A C 0.7277(4) 0.8472(3) 0.3097(3) 0.0204(12) Uani 1 1 d . . .
H12A H 0.7768 0.8600 0.2744 0.031 Uiso 1 1 calc R . .
H12B H 0.6775 0.8129 0.2735 0.031 Uiso 1 1 calc R . .
H12C H 0.7671 0.8276 0.3711 0.031 Uiso 1 1 calc R . .
C13A C 0.5582(4) 0.7484(3) 0.4006(3) 0.0221(12) Uani 1 1 d . . .
H13A H 0.5404 0.7104 0.4369 0.033 Uiso 1 1 calc R . .
H13B H 0.6339 0.7581 0.4247 0.033 Uiso 1 1 calc R . .
H13C H 0.5402 0.7355 0.3336 0.033 Uiso 1 1 calc R . .

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C14A C 0.3759(3) 0.8005(2) 0.4648(3) 0.0176(10) Uani 1 1 d . . .
 H14A H 0.4064 0.7738 0.5229 0.026 Uiso 1 1 calc R . .
 H14B H 0.3242 0.7720 0.4189 0.026 Uiso 1 1 calc R . .
 H14C H 0.3410 0.8416 0.4797 0.026 Uiso 1 1 calc R . .
 C15A C 0.5947(3) 1.0615(3) 0.6308(3) 0.0166(11) Uani 1 1 d . . .
 H15A H 0.5968 1.1049 0.5949 0.020 Uiso 1 1 calc R . .
 C16A C 0.4927(3) 1.06363(18) 0.6583(3) 0.0217(8) Uani 1 1 d . . .
 H16A H 0.4324 1.0657 0.6009 0.033 Uiso 1 1 calc R . .
 H16B H 0.4926 1.1045 0.6973 0.033 Uiso 1 1 calc R . .
 H16C H 0.4875 1.0220 0.6945 0.033 Uiso 1 1 calc R . .
 C17A C 0.6957(3) 1.0624(2) 0.7201(3) 0.0186(9) Uani 1 1 d . . .
 C18A C 0.7953(3) 1.0687(2) 0.6899(3) 0.0352(11) Uani 1 1 d . . .
 H18A H 0.7905 1.1096 0.6498 0.053 Uiso 1 1 calc R . .
 H18B H 0.8032 1.0274 0.6541 0.053 Uiso 1 1 calc R . .
 H18C H 0.8566 1.0730 0.7462 0.053 Uiso 1 1 calc R . .
 C19A C 0.6898(3) 1.1263(2) 0.7824(3) 0.0280(11) Uani 1 1 d . . .
 H19A H 0.7566 1.1312 0.8329 0.042 Uiso 1 1 calc R . .
 H19B H 0.6322 1.1201 0.8105 0.042 Uiso 1 1 calc R . .
 H19C H 0.6770 1.1679 0.7429 0.042 Uiso 1 1 calc R . .
 C20A C 0.7021(3) 0.9989(2) 0.7805(3) 0.0328(10) Uani 1 1 d . . .
 H20A H 0.7649 1.0016 0.8356 0.049 Uiso 1 1 calc R . .
 H20B H 0.7065 0.9578 0.7431 0.049 Uiso 1 1 calc R . .
 H20C H 0.6391 0.9959 0.8019 0.049 Uiso 1 1 calc R . .
 C21A C 0.2283(4) 0.8847(2) 0.2690(3) 0.0138(10) Uani 1 1 d . . .
 H21A H 0.2323 0.8748 0.3364 0.017 Uiso 1 1 calc R . .
 C22A C 0.2090(3) 0.8162(2) 0.2139(3) 0.0184(10) Uani 1 1 d . . .
 H22A H 0.2095 0.8247 0.1480 0.022 Uiso 1 1 calc R . .
 H22B H 0.2671 0.7839 0.2434 0.022 Uiso 1 1 calc R . .
 C23A C 0.1050(3) 0.7833(2) 0.2125(3) 0.0223(10) Uani 1 1 d . . .
 H23A H 0.1062 0.7711 0.2779 0.027 Uiso 1 1 calc R . .
 H23B H 0.0948 0.7403 0.1745 0.027 Uiso 1 1 calc R . .
 C24A C 0.0141(3) 0.8327(2) 0.1699(3) 0.0235(10) Uani 1 1 d . . .
 H24A H 0.0101 0.8427 0.1032 0.028 Uiso 1 1 calc R . .
 H24B H -0.0531 0.8110 0.1706 0.028 Uiso 1 1 calc R . .
 C25A C 0.0300(3) 0.8993(2) 0.2262(3) 0.0186(10) Uani 1 1 d . . .
 H25A H 0.0294 0.8896 0.2918 0.022 Uiso 1 1 calc R . .
 H25B H -0.0286 0.9314 0.1972 0.022 Uiso 1 1 calc R . .
 C26A C 0.1362(3) 0.9336(2) 0.2282(3) 0.0170(10) Uani 1 1 d . . .
 H26A H 0.1344 0.9468 0.1630 0.020 Uiso 1 1 calc R . .
 H26B H 0.1463 0.9760 0.2671 0.020 Uiso 1 1 calc R . .
 C27A C 0.4860(4) 1.0281(3) 0.1492(3) 0.0167(11) Uani 1 1 d . . .
 H27A H 0.5468 1.0547 0.1906 0.020 Uiso 1 1 calc R . .
 C28A C 0.5258(4) 0.9870(3) 0.0787(3) 0.0238(12) Uani 1 1 d . . .
 H28A H 0.4676 0.9589 0.0382 0.029 Uiso 1 1 calc R . .
 H28B H 0.5824 0.9553 0.1135 0.029 Uiso 1 1 calc R . .
 C29A C 0.5685(4) 1.0353(3) 0.0159(3) 0.0255(13) Uani 1 1 d . . .
 H29A H 0.6306 1.0606 0.0559 0.031 Uiso 1 1 calc R . .
 H29B H 0.5916 1.0076 -0.0306 0.031 Uiso 1 1 calc R . .

C30A C 0.4855(4) 1.0864(3) -0.0360(3) 0.0244(13) Uani 1 1 d . . .
 H30A H 0.4266 1.0615 -0.0811 0.029 Uiso 1 1 calc R . . .
 H30B H 0.5161 1.1187 -0.0727 0.029 Uiso 1 1 calc R . . .
 C31A C 0.4440(4) 1.1269(3) 0.0335(3) 0.0222(12) Uani 1 1 d . . .
 H31A H 0.3864 1.1576 -0.0022 0.027 Uiso 1 1 calc R . . .
 H31B H 0.5012 1.1562 0.0732 0.027 Uiso 1 1 calc R . . .
 C32A C 0.4026(4) 1.0794(2) 0.0982(3) 0.0183(11) Uani 1 1 d . . .
 H32A H 0.3814 1.1077 0.1453 0.022 Uiso 1 1 calc R . . .
 H32B H 0.3397 1.0542 0.0596 0.022 Uiso 1 1 calc R . . .
 Zr2 Zr 0.96872(3) 0.175321(17) 0.39630(3) 0.01100(10) Uani 1 1 d . . .
 Cl1B Cl 0.81864(9) 0.16147(6) 0.45721(8) 0.0177(3) Uani 1 1 d . . .
 Cl2B Cl 0.99938(9) 0.05790(6) 0.35414(8) 0.0168(3) Uani 1 1 d . . .
 Si1B Si 0.99100(11) 0.33935(7) 0.42586(9) 0.0133(3) Uani 1 1 d . . .
 Si2B Si 1.15760(10) 0.24174(7) 0.33297(9) 0.0147(3) Uani 1 1 d . . .
 C1B C 1.0711(3) 0.2661(2) 0.4928(3) 0.0093(10) Uani 1 1 d . . .
 C2B C 1.1429(3) 0.2267(2) 0.4538(3) 0.0125(11) Uani 1 1 d . . .
 C3B C 1.1595(3) 0.1627(2) 0.5033(3) 0.0105(10) Uani 1 1 d . . .
 H3B H 1.2028 0.1265 0.4928 0.013 Uiso 1 1 calc R . . .
 C4B C 1.1032(3) 0.1607(3) 0.5692(3) 0.0135(11) Uani 1 1 d . . .
 C5B C 1.0488(3) 0.2244(2) 0.5622(3) 0.0129(11) Uani 1 1 d . . .
 H5B H 1.0039 0.2370 0.5990 0.015 Uiso 1 1 calc R . . .
 C6B C 0.9398(3) 0.2850(2) 0.3149(3) 0.0120(10) Uani 1 1 d . . .
 C7B C 1.0102(3) 0.2441(2) 0.2757(3) 0.0128(10) Uani 1 1 d . . .
 C8B C 0.9468(4) 0.1929(2) 0.2160(3) 0.0133(10) Uani 1 1 d . . .
 C9B C 0.8427(4) 0.1996(3) 0.2208(3) 0.0134(10) Uani 1 1 d . . .
 H9B H 0.7855 0.1702 0.1903 0.016 Uiso 1 1 calc R . . .
 C10B C 0.8370(4) 0.2562(2) 0.2773(3) 0.0130(10) Uani 1 1 d . . .
 C11B C 0.8912(3) 0.3627(2) 0.4861(3) 0.0171(10) Uani 1 1 d . . .
 H11D H 0.9258 0.3864 0.5458 0.026 Uiso 1 1 calc R . . .
 H11E H 0.8568 0.3207 0.4992 0.026 Uiso 1 1 calc R . . .
 H11F H 0.8383 0.3933 0.4449 0.026 Uiso 1 1 calc R . . .
 C12B C 1.0698(3) 0.4175(3) 0.4162(3) 0.0204(11) Uani 1 1 d . . .
 H12D H 1.0386 0.4396 0.3546 0.031 Uiso 1 1 calc R . . .
 H12E H 1.1424 0.4038 0.4218 0.031 Uiso 1 1 calc R . . .
 H12F H 1.0696 0.4499 0.4670 0.031 Uiso 1 1 calc R . . .
 C13B C 1.2311(4) 0.3206(3) 0.3137(3) 0.0218(13) Uani 1 1 d . . .
 H13D H 1.3013 0.3212 0.3600 0.033 Uiso 1 1 calc R . . .
 H13E H 1.1923 0.3620 0.3216 0.033 Uiso 1 1 calc R . . .
 H13F H 1.2380 0.3197 0.2494 0.033 Uiso 1 1 calc R . . .
 C14B C 1.2262(3) 0.1655(3) 0.3019(3) 0.0202(12) Uani 1 1 d . . .
 H14D H 1.2248 0.1686 0.2352 0.030 Uiso 1 1 calc R . . .
 H14E H 1.1904 0.1231 0.3116 0.030 Uiso 1 1 calc R . . .
 H14F H 1.2995 0.1646 0.3423 0.030 Uiso 1 1 calc R . . .
 C15B C 1.1048(4) 0.1030(2) 0.6407(3) 0.0126(10) Uani 1 1 d . . .
 H15B H 1.0310 0.0966 0.6432 0.015 Uiso 1 1 calc R . . .
 C16B C 1.1396(3) 0.03504(17) 0.6063(2) 0.0227(9) Uani 1 1 d . . .
 H16D H 1.0972 0.0264 0.5408 0.034 Uiso 1 1 calc R . . .
 H16E H 1.1298 -0.0028 0.6469 0.034 Uiso 1 1 calc R . . .

H16F H 1.2142 0.0381 0.6093 0.034 Uiso 1 1 calc R . .
 C17B C 1.1739(3) 0.1228(2) 0.7423(3) 0.0146(9) Uani 1 1 d . . .
 C18B C 1.1292(3) 0.18646(18) 0.7783(2) 0.0236(9) Uani 1 1 d . . .
 H18D H 1.1694 0.1953 0.8445 0.035 Uiso 1 1 calc R . .
 H18E H 1.0551 0.1783 0.7740 0.035 Uiso 1 1 calc R . .
 H18F H 1.1344 0.2265 0.7394 0.035 Uiso 1 1 calc R . .
 C19B C 1.1735(3) 0.0632(2) 0.8098(3) 0.0251(10) Uani 1 1 d . . .
 H19D H 1.2095 0.0233 0.7928 0.038 Uiso 1 1 calc R . .
 H19E H 1.1006 0.0508 0.8049 0.038 Uiso 1 1 calc R . .
 H19F H 1.2101 0.0773 0.8749 0.038 Uiso 1 1 calc R . .
 C20B C 1.2866(3) 0.13916(19) 0.7437(3) 0.0227(8) Uani 1 1 d . . .
 H20D H 1.3273 0.1537 0.8076 0.034 Uiso 1 1 calc R . .
 H20E H 1.2860 0.1764 0.6987 0.034 Uiso 1 1 calc R . .
 H20F H 1.3190 0.0979 0.7258 0.034 Uiso 1 1 calc R . .
 C21B C 0.9819(4) 0.1432(2) 0.1518(3) 0.0138(11) Uani 1 1 d . . .
 H21B H 1.0421 0.1155 0.1921 0.017 Uiso 1 1 calc R . .
 C22B C 1.0225(4) 0.1842(3) 0.0799(3) 0.0191(11) Uani 1 1 d . . .
 H22C H 0.9640 0.2118 0.0386 0.023 Uiso 1 1 calc R . .
 H22D H 1.0784 0.2165 0.1144 0.023 Uiso 1 1 calc R . .
 C23B C 1.0653(4) 0.1371(3) 0.0199(3) 0.0270(13) Uani 1 1 d . . .
 H23C H 1.1274 0.1122 0.0605 0.032 Uiso 1 1 calc R . .
 H23D H 1.0883 0.1646 -0.0269 0.032 Uiso 1 1 calc R . .
 C24B C 0.9819(4) 0.0853(3) -0.0317(3) 0.0267(13) Uani 1 1 d . . .
 H24C H 0.9242 0.1100 -0.0784 0.032 Uiso 1 1 calc R . .
 H24D H 1.0135 0.0523 -0.0667 0.032 Uiso 1 1 calc R . .
 C25B C 0.9371(4) 0.0459(3) 0.0360(3) 0.0213(12) Uani 1 1 d . . .
 H25C H 0.8789 0.0160 -0.0009 0.026 Uiso 1 1 calc R . .
 H25D H 0.9925 0.0157 0.0763 0.026 Uiso 1 1 calc R . .
 C26B C 0.8962(4) 0.0929(3) 0.0984(3) 0.0175(11) Uani 1 1 d . . .
 H26C H 0.8726 0.0650 0.1444 0.021 Uiso 1 1 calc R . .
 H26D H 0.8349 0.1191 0.0590 0.021 Uiso 1 1 calc R . .
 C27B C 0.7349(3) 0.2875(2) 0.2874(3) 0.0129(10) Uani 1 1 d . . .
 H27B H 0.7426 0.2938 0.3564 0.015 Uiso 1 1 calc R . .
 C28B C 0.7185(4) 0.3589(2) 0.2390(3) 0.0191(10) Uani 1 1 d . . .
 H28C H 0.7802 0.3886 0.2684 0.023 Uiso 1 1 calc R . .
 H28D H 0.7129 0.3535 0.1710 0.023 Uiso 1 1 calc R . .
 C29B C 0.6186(3) 0.3936(2) 0.2487(3) 0.0269(11) Uani 1 1 d . . .
 H29C H 0.6084 0.4385 0.2152 0.032 Uiso 1 1 calc R . .
 H29D H 0.6265 0.4025 0.3164 0.032 Uiso 1 1 calc R . .
 C30B C 0.5219(3) 0.3476(2) 0.2067(3) 0.0247(11) Uani 1 1 d . . .
 H30C H 0.4592 0.3692 0.2182 0.030 Uiso 1 1 calc R . .
 H30D H 0.5088 0.3437 0.1373 0.030 Uiso 1 1 calc R . .
 C31B C 0.5384(4) 0.2755(3) 0.2512(3) 0.0242(11) Uani 1 1 d . . .
 H31C H 0.5415 0.2789 0.3189 0.029 Uiso 1 1 calc R . .
 H31D H 0.4775 0.2459 0.2190 0.029 Uiso 1 1 calc R . .
 C32B C 0.6376(4) 0.2426(2) 0.2435(3) 0.0170(10) Uani 1 1 d . . .
 H32C H 0.6311 0.2344 0.1758 0.020 Uiso 1 1 calc R . .
 H32D H 0.6470 0.1973 0.2759 0.020 Uiso 1 1 calc R . .

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C51 C 0.4060(5) 0.7942(4) 0.0937(4) 0.0518(18) Uani 1 1 d . . .
H51A H 0.3824 0.8402 0.0883 0.062 Uiso 1 1 d . . .
H51B H 0.4104 0.7772 0.1573 0.062 Uiso 1 1 d . . .
C15 Cl 0.52886(9) 0.78875(6) 0.07809(10) 0.0480(3) Uani 1 1 d . . .
C16 Cl 0.30918(11) 0.74423(7) 0.01493(9) 0.0294(3) Uani 1 1 d . . .
C52 C 0.7669(6) 0.8551(4) -0.0427(5) 0.057(2) Uani 0.6464(19) 1 d P . .
H52A H 0.8417 0.8588 -0.0411 0.069 Uiso 0.6464(19) 1 calc PR . .
H52B H 0.7243 0.8803 -0.0994 0.069 Uiso 0.6464(19) 1 calc PR . .
C17 Cl 0.7516(2) 0.89424(14) 0.05601(19) 0.0587(8) Uani 0.6464(19) 1 d P .
.
C18 Cl 0.73072(19) 0.76883(13) -0.05446(16) 0.0451(7) Uani 0.6464(19) 1 d
P . .
C53 C 0.1013(4) 0.8648(3) 0.9161(4) 0.0346(14) Uani 1 1 d . . .
H53A H 0.1222 0.8429 0.8637 0.041 Uiso 1 1 calc R . .
H53B H 0.0952 0.8280 0.9606 0.041 Uiso 1 1 calc R . .
C19 Cl 0.20000(11) 0.92392(7) 0.97580(8) 0.0284(3) Uani 1 1 d . . .
Cl10 Cl -0.02025(9) 0.90465(6) 0.87026(9) 0.0444(3) Uani 1 1 d . . .

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_atom_site_aniso_U_23
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_atom_site_aniso_U_12
Zr1 0.0106(2) 0.0102(2) 0.0132(2) 0.0003(2) 0.00302(18) 0.0010(2)
Cl1A 0.0156(6) 0.0119(6) 0.0241(6) 0.0010(5) 0.0047(5) -0.0024(5)
Cl2A 0.0129(5) 0.0199(6) 0.0200(5) -0.0014(5) 0.0064(4) 0.0021(5)
Si1A 0.0120(7) 0.0156(8) 0.0124(6) 0.0000(6) 0.0037(5) 0.0013(6)
Si2A 0.0150(7) 0.0103(6) 0.0150(6) -0.0010(5) 0.0043(5) 0.0005(5)
C1A 0.011(2) 0.009(2) 0.017(2) -0.0012(19) -0.0003(19) 0.0035(19)
C2A 0.019(3) 0.013(3) 0.014(2) 0.002(2) 0.0018(19) 0.008(2)
C3A 0.007(2) 0.013(3) 0.017(2) 0.004(2) -0.0004(18) 0.0008(19)
C4A 0.010(2) 0.017(3) 0.009(2) 0.003(2) -0.0017(17) 0.002(2)
C5A 0.009(2) 0.020(3) 0.012(2) 0.008(2) 0.0021(17) 0.003(2)
C6A 0.010(2) 0.015(3) 0.015(2) 0.000(2) 0.0014(19) -0.004(2)
C7A 0.019(3) 0.012(2) 0.011(2) 0.0004(18) 0.0041(19) 0.001(2)
C8A 0.010(2) 0.018(3) 0.011(2) -0.0073(19) -0.0017(18) 0.001(2)
C9A 0.015(2) 0.007(2) 0.012(2) 0.0015(17) -0.0028(18) 0.0004(18)
C10A 0.011(2) 0.012(2) 0.010(2) -0.0029(18) -0.0038(17) -0.0018(19)
C11A 0.020(3) 0.026(3) 0.020(3) -0.002(2) 0.009(2) -0.006(3)
C12A 0.019(3) 0.023(3) 0.018(3) -0.003(2) 0.005(2) 0.008(2)
C13A 0.024(3) 0.016(3) 0.024(2) 0.001(2) 0.003(2) 0.003(2)
C14A 0.021(2) 0.018(2) 0.014(2) 0.0002(17) 0.0045(18) 0.0033(19)
C15A 0.012(2) 0.018(3) 0.018(2) 0.003(2) 0.0011(18) -0.004(2)
C16A 0.017(2) 0.022(2) 0.029(2) -0.0102(17) 0.0106(17) -0.0018(16)
C17A 0.023(2) 0.019(2) 0.013(2) -0.0055(17) 0.0043(17) -0.0006(18)

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C18A 0.018(2) 0.061(3) 0.023(2) -0.013(2) 0.0013(18) -0.005(2)
 C19A 0.022(2) 0.025(2) 0.033(3) -0.0118(19) 0.0018(19) 0.0024(19)
 C20A 0.047(3) 0.027(2) 0.019(2) -0.0046(19) 0.0003(19) 0.002(2)
 C21A 0.018(2) 0.013(2) 0.010(2) 0.0014(16) 0.0046(17) -0.0009(18)
 C22A 0.015(2) 0.015(2) 0.023(2) 0.0001(18) 0.0016(18) 0.0026(17)
 C23A 0.020(2) 0.013(2) 0.031(3) -0.0042(19) 0.0020(19) -0.0068(17)
 C24A 0.017(2) 0.027(2) 0.022(2) 0.0027(19) 0.0003(18) -0.0084(18)
 C25A 0.013(2) 0.023(2) 0.016(2) 0.0003(18) -0.0003(17) 0.0012(18)
 C26A 0.011(2) 0.019(2) 0.018(2) 0.0005(18) 0.0006(17) -0.0016(18)
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 C28A 0.028(3) 0.017(3) 0.027(3) 0.001(2) 0.010(2) 0.009(3)
 C29A 0.027(3) 0.034(3) 0.020(3) 0.006(2) 0.014(2) -0.001(3)
 C30A 0.033(3) 0.026(3) 0.015(2) 0.012(2) 0.008(2) -0.004(2)
 C31A 0.026(3) 0.019(3) 0.019(2) 0.008(2) 0.003(2) -0.009(2)
 C32A 0.017(3) 0.016(3) 0.018(2) 0.003(2) -0.002(2) 0.000(2)
 Zr2 0.0112(2) 0.0103(2) 0.0115(2) -0.00060(19) 0.00340(18) -0.0011(2)
 Cl1B 0.0164(6) 0.0194(6) 0.0192(5) -0.0002(5) 0.0083(4) -0.0018(5)
 Cl2B 0.0179(6) 0.0130(6) 0.0191(6) -0.0031(5) 0.0045(5) -0.0016(5)
 Si1B 0.0154(7) 0.0100(6) 0.0124(6) 0.0002(5) 0.0008(5) -0.0004(5)
 Si2B 0.0114(7) 0.0164(8) 0.0154(7) 0.0027(6) 0.0025(5) -0.0016(6)
 C1B 0.007(2) 0.009(2) 0.008(2) -0.0025(18) -0.0046(17) -0.0020(18)
 C2B 0.006(2) 0.019(3) 0.010(2) -0.0029(19) -0.0006(18) -0.005(2)
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 C13B 0.020(3) 0.026(3) 0.020(3) 0.001(2) 0.007(2) -0.007(2)
 C14B 0.013(3) 0.028(3) 0.018(2) 0.001(2) 0.002(2) 0.000(2)
 C15B 0.018(2) 0.007(2) 0.016(2) 0.0055(18) 0.0104(18) -0.0011(19)
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 C17B 0.018(2) 0.015(2) 0.011(2) 0.0024(16) 0.0053(16) -0.0001(17)
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 C19B 0.030(2) 0.022(2) 0.022(2) 0.0095(18) 0.0063(19) 0.0059(19)
 C20B 0.020(2) 0.028(2) 0.017(2) 0.0046(17) 0.0010(16) -0.0022(17)
 C21B 0.013(2) 0.012(2) 0.016(2) -0.0032(19) 0.0033(19) 0.001(2)
 C22B 0.020(3) 0.029(3) 0.011(2) -0.004(2) 0.007(2) 0.003(2)
 C23B 0.031(3) 0.033(3) 0.020(3) -0.003(2) 0.010(2) 0.000(3)
 C24B 0.028(3) 0.030(3) 0.023(3) -0.004(2) 0.009(2) 0.010(3)
 C25B 0.022(3) 0.023(3) 0.016(2) -0.003(2) 0.001(2) 0.000(2)
 C26B 0.020(3) 0.019(3) 0.016(2) -0.002(2) 0.008(2) 0.005(2)
 C27B 0.010(2) 0.014(2) 0.012(2) -0.0021(17) -0.0012(16) 0.0019(18)
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 C16 0.0316(7) 0.0266(7) 0.0284(7) -0.0048(6) 0.0063(6) -0.0034(6)
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 C17 0.0491(15) 0.0461(16) 0.0911(19) -0.0013(14) 0.0363(14) 0.0104(11)
 C18 0.0466(14) 0.0433(14) 0.0461(13) 0.0113(11) 0.0150(10) 0.0137(11)
 C53 0.024(3) 0.026(3) 0.049(3) -0.025(3) 0.004(2) -0.002(2)
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 C110 0.0343(7) 0.0344(6) 0.0549(8) -0.0136(6) -0.0017(6) 0.0080(5)

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All esds (except the esd in the dihedral angle between two l.s. planes)
 are estimated using the full covariance matrix. The cell esds are taken
 into account individually in the estimation of esds in distances, angles
 and torsion angles; correlations between esds in cell parameters are only
 used when they are defined by crystal symmetry. An approximate
 (isotropic)

treatment of cell esds is used for estimating esds involving l.s. planes.

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 Zr1 C12A 2.4322(12) . yes
 Zr1 C1A 2.439(4) . yes
 Zr1 C3A 2.532(4) . yes
 Zr1 C5A 2.539(4) . yes
 Zr1 C10A 2.612(4) . yes
 Zr1 C8A 2.612(4) . yes
 Zr1 C9A 2.645(4) . yes
 Zr1 C4A 2.646(4) . yes
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 Si1A C11A 1.855(5) . ?
 Si1A C1A 1.880(5) . ?
 Si1A C6A 1.885(4) . ?
 Si2A C14A 1.865(5) . ?

Si2A C13A 1.866(5) . ?
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C51 C16 1.750(6) . ?
C52 C17 1.708(8) . ?
C52 C18 1.734(7) . ?
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